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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,180	02/18/2004	Yasutoshi Tasaka	2083.69735	1822
7590 10/15/2007 Patrick G. Burns, Esq. GREER, BURNS & CRAIN, LTD. Suite 2500 300 South Wacker Drive Chicago, IL 60606			EXAMINER NGUYEN, HOAN C	
			ART UNIT 2871	PAPER NUMBER
			MAIL DATE 10/15/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/781,180	TASAKA ET AL.	
	Examiner	Art Unit	
	HOAN C. NGUYEN	2871	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 26,27 and 29 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

In preliminary amendment, claims 1-25 are cancelled. Claims 26-29 are still pending.

#### ***Response to Amendment***

Applicant's arguments with respect to claims 26-29 based on the Response filed on 07/26/2007 have been considered but are in the old ground(s) of rejection. Therefore, this is Final action.

Since applicants have discussed the mask in Figs. 4-5 of Choi et al. (US7016112). In order to clarify the invention and compare to reference, examiner now requests applicants to provide the Drawings illustrating all limitation of the method claims 26-29.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the all features in claims 26-29 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

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is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 26-27 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Choi et al. (US7016112B2).

In regard to claim 26, Choi et al. disclose (figs. 4-5) a method of fabricating a liquid crystal display device comprising a pair of opposed and spaced substrates, an alignment layer formed on one of said substrates, an alignment layer formed on the

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other substrate, a plurality of bus lines provided on one of said substrates, and a liquid crystal inserted between said pair of substrates, said method comprising the steps of:

- forming an alignment layer 50 on each of said substrates 70;
- preparing a mask (including 10 and 80 as Fig. 5A shown) having
  - a body portion 10 as shown in Fig. 4B
  - a plurality of light path changing portions arranged in said body portion corresponding to pixel pitches, said body portion of said mask has a first flat surface (rear surface of mask 80),
  - a second surface on the opposite side from said first surface (front surface of 10), and
  - a plurality of cavities provided in said second surface, first and second vertical planes being defined perpendicular to said first surface and perpendicular to each other,
  - each cavity having first and second oblique surfaces (surfaces of quartz substrate 15) arranged on either side of the first vertical plane to diverge in the direction from said first surface toward said second surface, and third and fourth oblique surfaces arranged on either side of the second vertical plane to diverge in the direction from said first surface toward said second surface, said light path changing portions being formed by said cavities and a material contained in said cavities;
- putting said mask on said substrate 70; and

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- irradiating the surface of said alignment layer of said substrate with ultraviolet light (col. 3 line 4) in the oblique direction; using said mask

wherein

Claim 27:

- said cavity has a saw-toothed shape having an equilateral triangular cross-section as Fig. 4B shown.

Claim 29:

- alignment treatment by the irradiation of ultraviolet light is carried out regarding one of the substrates having no such bus lines, and alignment treatment by the irradiation of ultraviolet light is not carried out regarding the other substrate having said bus lines.

***Allowable Subject Matter***

Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: there is no prior teaches the cavity having a saw-toothed shape having a trapezoidal cross-section as claim 28 cited.

***Response to Arguments***

Applicant's arguments filed on 07/26/2007 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are follows:

Choi provides no other details regarding the mask 80 in the polarizer system of Choi et al. In other words, the reference does not disclose a mask having, among other things, a plurality of cavities having oblique surfaces for changing the path of light incident on the mask.

Examiner's responses to Applicants' ONLY arguments are follows:

Examiner considers the combination of the polarizer 10 disposed on the passive mask 80 as mask, which cited in claims 26-27 and 29.

First, the polarizer 10 comprises

- one or more quartz substrate parts 15 formed as a rectangle, and
- polarizer holders 13 formed as a lattice structure supporting quartz substrate part

wherein **the polarizer holders 13 are made of optically absorptive material** (col. 4 lines 4-5) thus the polarizer holders 13 act as the light shielding in the mask configuration. Therefore, the polarizer 10 itself can perform as the mask, which has structure of square-lattice structure.

Second, the combination of the polarizer 10 disposed on the passive mask 80 will consider as a mask, which comprising a plurality of cavities having oblique surfaces for changing the path of light incident on the mask (see attachment).



***Conclusion***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HOAN C. NGUYEN** whose telephone number is (571) 272-2296. The examiner can normally be reached on **MONDAY-THURSDAY:8:00AM-4:30PM**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.




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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOAN C. NGUYEN  
Examiner  
Art Unit 2871

Chn

  
ANDREW SCHECHTER  
PRIMARY EXAMINER

Attachment

FIG. 4A

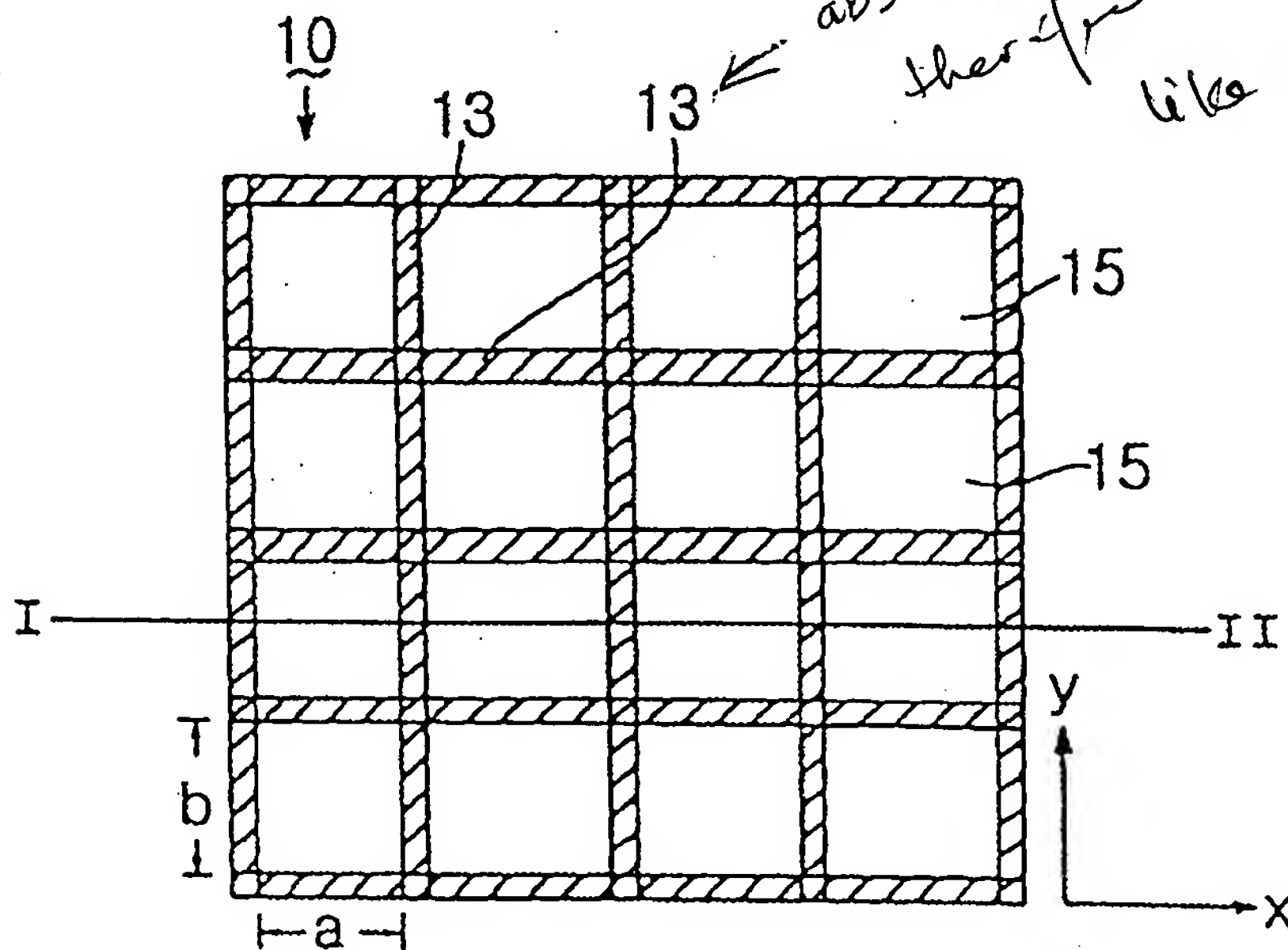


FIG. 4B

